

Ser.no. 10/656,948
Amendment dated January 11, 2006
In Reply to Office Action dated July 13, 2005

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

CLAIMS

Claims 1 to 3 (Cancelled)

Claims 4 to 22 (Previously Withdrawn)

Claims 23 to 27 (Cancelled)

Claims 28 to 31 (Previously Withdrawn)

32.(New) An elongated substantially flat exhaust flange comprising:

a first part having a receiving surface and a pipe attachment means arranged on a pipe attachment surface opposite to said receiving surface; and

a second part;

said receiving surface having means for mating with said second part, and wherein at least one of said first or second part is made of powder metallurgically produced material.

33.(New) The exhaust flange of claim 32 wherein said means for mating with said second part is a cavity or a protrusion.

34.(New) The exhaust flange of claim 33 wherein said first part is a substantially flat backing plate and said second part is an annular sealing part, said first part having a backing plate recess and said second part having a sealing part recess;

wherein said backing plate recess and said sealing part recess have complimentary shapes so that said backing plate recess mates in said sealing part recess.

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35.(New) The exhaust flange of claim 34 wherein said backing plate recess is a central through hole.

36.(New) The exhaust flange of claim 34 wherein said backing plate recess is stepped.

37.(New) The exhaust flange of claim 34 wherein said sealing part recess is stepped.

38.(New) The exhaust flange of claim 34, wherein said second part is made of a powder metallurgically produced material.

39.(New) The exhaust flange of claim 34, wherein said first part is made of a powder metallurgically produced material.

40.(New) The exhaust flange of claim 34, wherein said first part and said second part are made of powder metallurgically produced material.

41.(New) The exhaust flange of claim 32 wherein at least one of said flanges has one or more reinforcement ribs.

42.(New) The exhaust flange of claim 32, wherein said flange has at least one means for weight reduction.

43.(New) The exhaust flange of claim 32, wherein said flange has bolt mounting holes arranged to receive threaded bolts onto which nuts are threadable.

44.(New) The exhaust flange of claim 43, wherein said bolts have generally spherical portions facing the bolt thread, said spherical portions of said bolts arranged to cooperate with generally concave recesses arranged in said flange around said mounting holes.

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45.(New) The exhaust flange of claim 32, wherein said flange has a curved extension protruding in a direction opposite to said cavity, said extension arranged to be fitted into said end of said exhaust pipe, thereby deforming said exhaust pipe to form a joint.

46.(New) The exhaust flange of claim 45, wherein said extension has a groove surrounded by an inner ridge and an outer ridge, arranged on an outer surface of said extension.

47.(New) The exhaust flange of claim 32 wherein said second part is a gasket.

48.(New) The exhaust flange of claim 38 wherein said first part and said second part are sintered together.

49.(New) The exhaust flange of claim 47 wherein said first part and said second part are sintered together.

50.(New) The exhaust flange of claim 32, wherein said flange has an annular gasket recess arranged on said receiving surface of said flange.

51.(New) The exhaust flange of claim 32 wherein said flange has an annular gasket recess arranged on said second part.

52 .(New) The exhaust flange of claim 50 wherein said annular gasket recess has gasket retaining means.

53 .(New) The exhaust flange of claim 51 wherein said annular gasket recess has gasket retaining means.

54.(New) The exhaust flange of claim 52 wherein said gasket retaining means comprises gasket recess protrusions.

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55.(New) The exhaust flange of claim 53 wherein said gasket retaining means comprises gasket recess protrusions.

56.(New) The exhaust flange of claim 52 wherein said gasket retaining means are generally oval.

57.(New) The exhaust flange of claim 53 wherein said gasket retaining means are generally oval.

58.(New) An exhaust flange assembly comprising:

a male flange including

a first part having a receiving surface and a pipe attachment means arranged on a pipe attachment surface opposite to said receiving surface; and

a second part;

said receiving surface having a cavity for receiving said second part, and wherein at least one of said first or second part is made of powder metallurgically produced material; and

a female flange including

a pipe attachment means arranged on a pipe attachment surface; and

a mating surface for complementarily mating with said male flange.

59.(New) The exhaust flange assembly of claim 58 wherein said female flange and said male flange mate at at least one sealing surface.

60.(New) A method of forming an elongated substantially flat exhaust flange comprising the steps of:

forming a backing plate from a powder metallurgically produced material;

forming a sealing part from a powder metallurgically produced material; and

sintering the sealing part to the backing plate.

61.(New) The method of claim 60 further comprising the step of, before the step of sintering:

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applying a bonding material or welding flux to mating surfaces of said backing plate and said sealing part.

62.(New) The method of claim 60 further comprising the step of:
welding said sealing plate to said backing plate after said step of sintering.

63.(New) The method of claim 61 further comprising the step of:
welding said sealing plate to said backing plate after said step of sintering.

64.(New) The method of claim 60 further comprising the step, occurring before the step of sintering, of:
providing gasket retention means on said backing plate.

65.(New) The method of claim 61 further comprising the step, occurring before the step of sintering, of:
providing gasket retention means on said backing plate.

66.(New) The method of claim 62 further comprising the step, occurring before the step of sintering, of:
providing gasket retention means on said backing plate.

67.(New) The method of claim 63 further comprising the step, occurring before the step of sintering, of:
providing gasket retention means on said backing plate.

68.(New) The method of claim 60 further comprising the step, occurring before the step of sintering, of:
providing gasket retention means on said sealing plate.

69.(New) The method of claim 61 further comprising the step, occurring before the step of sintering, of:

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providing gasket retention means on said sealing plate.

70.(New) The method of claim 62 further comprising the step, occurring before the step of sintering, of:

providing gasket retention means on said sealing plate.

71.(New) The method of claim 63 further comprising the step, occurring before the step of sintering, of:

providing gasket retention means on said sealing plate.